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NEWS	8	JAN 28	MEDLINE and LMEDLINE reloaded with enhancements
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NEWS	15	MAR 31	CAS REGISTRY enhanced with additional experimental spectra
NEWS	16	MAR 31	CA/CAPLUS and CASREACT patent number format for U.S. applications updated
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NEWS	24	MAY 30	DGENE, PCTGEN, and USGENE enhanced with new homology sequence search option
NEWS	25	JUN 06	EPFULL enhanced with 260,000 English abstracts
NEWS	26	JUN 06	KOREAPAT updated with 41,000 documents
NEWS	27	JUN 13	USPATFULL and USPAT2 updated with 11-character patent numbers for U.S. applications
NEWS	28	JUN 19	CAS REGISTRY includes selected substances from web-based collections

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* * * * * STN Columbus * * * * *

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=> file caplus

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FILE COVERS 1907 - 21 Jun 2008 VOL 148 ISS 26

FILE LAST UPDATED: 20 Jun 2008 (20080620/ED)

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=> s crown ether (P2) (amino acid or peptide or protein or polypeptide)
MISSING OPERATOR 'ETHER (P2'

The search profile that was entered contains terms or nested terms that are not separated by a logical operator.

=> s (crown (w) ether) (P2) (amino acid or peptide or protein or polypeptide)
MISSING OPERATOR ETHER) (P2

The search profile that was entered contains terms or nested terms that are not separated by a logical operator.

```
=> s (crown (w) ether) (P) (amino acid or peptide or protein or polypeptide)
    40164 CROWN
    529556 ETHER
    1173515 AMINO
<-----User Break----->
```

SEARCH ENDED BY USER

```
=> s (crown (w) ether) (P) ((amino(w) acid) or peptide or protein or
polypeptide)
    40164 CROWN
    529556 ETHER
    1173515 AMINO
    4600329 ACID
    396477 PEPTIDE
    2168943 PROTEIN
    109060 POLYPEPTIDE
L1      451 (CROWN (W) ETHER) (P) ((AMINO(W) ACID) OR PEPTIDE OR PROTEIN OR
        POLYPEPTIDE)
```

```
=> s l1 (p) (benzoic or sulfonic or sulphonic)
    96713 BENZOIC
    84509 SULFONIC
    1603 SULPHONIC
L2      1 L1 (P) (BENZOIC OR SULFONIC OR SULPHONIC)
```

```
=> s l1 (p) (react or reaction or reacting or reacted or complex?)
    156460 REACT
    3183549 REACTION
    135032 REACTING
    198539 REACTED
    1829413 COMPLEX?
L3      189 L1 (P) (REACT OR REACTION OR REACTING OR REACTED OR COMPLEX?)
```

```
=> s l3 and (BENZOIC OR SULFONIC OR SULPHONIC)
    96713 BENZOIC
    84509 SULFONIC
    1603 SULPHONIC
L4      2 L3 AND (BENZOIC OR SULFONIC OR SULPHONIC)
```

```
=> d l4 bib ab 1-2
```

```
L4      ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2008 ACS on STN
AN      2005:36579  CAPLUS <<LOGINID::20080621>>
DN      142:114475
TI      Chemical reagents capable of selective attachment to and reaction with
        peptides and proteins
IN      Beauchamp, Jesse L.; Julian, Ryan R.; Stoltz, Brian M.; May, Jeremy A.
PA      USA
SO      U.S. Pat. Appl. Publ., 14 pp.
        CODEN: USXXCO
DT      Patent
LA      English
FAN.CNT 1
```

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 20050010059	A1	20050113	US 2004-782373	20040218
PRAI	US 2003-448290P	P	20030219		
AB	<p>***Crown*** ***ether*** -contg. biomimetic reagents, e.g. (I) (R = Q) and (II) (R = Q), capable of selectively forming non-covalent ***complexes*** and initiating intermol. reactions with peptides in the gas phase are described and their reactions with primary amines and peptides in the gas phase was studied by electrospray ionization mass spectrometry (ESI-MS). The reagents are particularly useful in the synthesis of amine-contg. compds., and particularly gas phase ***peptide*** chem. The invention also relates to the use of diazo-based reagents, e.g. (III) (R = R1 = Q; R= Q, R1 = Et), that bind to and become covalently attached to ***amino*** ***acid*** residues, particularly residues contg. primary amines. It further relates to the use of reagents contg. acidic groups or transition metal binding functionalities that initiate selective cleavage of ***amino*** ***acid*** residues, particularly residues contg. primary amines.</p>				

There

is claimed a method of selectively forming noncovalent ***complexes*** and initiating intermol. reactions with amine-contg. compds. comprises ***reacting*** the amine-contg. compd. with a second compd. comprising at least one ***crown*** ***ether*** group and a moiety selected from acidic groups, transition metal binding groups and diazo groups, wherein the ***crown*** ***ether*** is 18-crown-6 ether and the acidic group is ***benzoic*** acid. Thus, 18-crown-6-methanol was treated with lithium diisopropylamine in THF at 70.degree. followed by etherification with 2,9-bis(bromomethyl)-1,10-phenanthroline in THF/CH2Cl2 at room temp. for 24 h gave the compd. I. ESI-MS of the compd. I, Cu(I), and H-Lys-Lys-OH (KK) indicated that compd. I formed an abundant noncovalent ***complex*** with the ***peptide*** KK and copper(I). Collisional activation of the base peak [1+KK+Cu+H]2+ resulted primarily in dissocn. of the ***complex*** into (1+Cu)+ and [KK+H]+ with an addnl. prominent peak corresponding to the loss of 44 Da from [KK+H]+. This loss is most likely explained as elimination of CO2 from the C-terminus. Collisional activation of the much less abundant ***complex*** [1+KK+Cu+2H]3+ yielded the loss of CO2 directly. In the absence of the Cu(I) ion, no loss of 44 Da was obsd. for either charge state, suggesting that Cu(I) effectively initiates this ***reaction***.

L4 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1988:6386 CAPLUS <<LOGINID::20080621>>

DN 108:6386

OREF 108:1219a,1222a

TI The use of crown ethers in peptide chemistry. Part 1. Syntheses of amino acid complexes with the cyclic polyether 18-crown-6 and their oligomerization in dicyclohexylcarbodiimide-containing solutions

AU Mascagni, Paolo; Hyde, Carolyn B.; Charalambous, Mario A.; Welham, Kevin J.

CS Sch. Pharm., Univ. London, London, WC1N 1AX, UK

SO Journal of the Chemical Society, Perkin Transactions 2: Physical Organic Chemistry (1972-1999) (1987), (3), 323-7
CODEN: JCPKBH; ISSN: 0300-9580

DT Journal

LA English

OS CASREACT 108:6386

AB The synthesis of ***amino*** ***acid*** ***complexes*** with cyclic polyether 18-crown-6 and their soly. properties in org. solvents are described. Oligo homo- ***amino*** ***acid*** peptides have been prepd. using the ***crown*** ***ether*** ***complexes*** and dicyclohexylcarbodiimide as coupling agent. The mechanism leading to the formation of the oligopeptides involves transfer of one N-H proton from the ***crown*** ***ether*** ***complex*** to the carbodiimide nitrogen.

=> d his

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FILE 'CAPLUS' ENTERED AT 07:21:02 ON 21 JUN 2008

L1 451 S (CROWN (W) ETHER) (P) ((AMINO(W) ACID) OR PEPTIDE OR PROTEIN
L2 1 S L1 (P) (BENZOIC OR SULFONIC OR SULPHONIC)
L3 189 S L1 (P) (REACT OR REACTION OR REACTING OR REACTED OR COMPLEX?)
L4 2 S L3 AND (BENZOIC OR SULFONIC OR SULPHONIC)

=> S L3 AND (diazo)
35274 DIAZO

L5 2 L3 AND (DIAZO)

=> s l5 not l4

L6 1 L5 NOT L4

=> d l6 bib ab

L6 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2003:581554 CAPLUS <<LOGINID::20080621>>

DN 140:321682

TI Biomimetic approaches to gas phase peptide chemistry: combining selective binding motifs with reactive carbene precursors to form molecular mousetraps

AU Julian, Ryan R.; May, Jeremy A.; Stoltz, Brian M.; Beauchamp, J. L.

CS Beckman Institute, California Institute of Technology, Pasadena, CA, 91125, USA

SO International Journal of Mass Spectrometry (2003), 228(2-3), 851-864
CODEN: IMSPF8; ISSN: 1387-3806

PB Elsevier Science B.V.

DT Journal

LA English

OS CASREACT 140:321682

AB Biomimetic reagents capable of selectively forming non-covalent complexes and initiating intermol. reactions with peptides in the gas phase are presented. In the present work, 18-crown-6 ether (18C6) is utilized to bind specifically to various protonated primary amines, including the protonated side chain of lysine. The use of multiple crown ethers is shown to be an efficient method for enhancing the binding energy, which is a crit. factor influencing the success of these reagents. The binding energy must exceed any reaction barriers to the desired chem., otherwise simple dissocn. of the complex occurs. Two reagents contg. acidic and transition metal binding functionalities, resp., designed to selectively cleave peptide bonds, are synthesized and tested exptl. A third class of reagent designed to covalently attach to peptides utilizing carbene insertion chem. is also presented. The results demonstrate that combining

the recognition and binding powers of 18C6 with an easily activated
 diazo group allows for the efficient generation of a highly
 reactive carbene within a non-covalent complex. Intermol. insertion
 reactions initiated by the carbene can transform these non-covalent
 complexes into covalently bound mols. Electrospray ionization mass
 spectrometry and d. functional theory (DFT) are utilized to evaluate these
 intermol. insertion reactions. The results from expts. with several small
 mols. and peptides are presented. These ***diazo*** -based reagents
 prove to be highly versatile mols. capable of binding to, and with
 appropriate activation, becoming covalently attached to virtually any mol.
 that contains a primary amine. For this reason, they have been dubbed
 mol. mousetraps.

RE.CNT 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD
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=> d his

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FILE 'CAPLUS' ENTERED AT 07:21:02 ON 21 JUN 2008

L1 451 S (CROWN (W) ETHER) (P) ((AMINO(W) ACID) OR PEPTIDE OR PROTEIN
 L2 1 S L1 (P) (BENZOIC OR SULFONIC OR SULPHONIC)
 L3 189 S L1 (P) (REACT OR REACTION OR REACTING OR REACTED OR COMPLEX?)
 L4 2 S L3 AND (BENZOIC OR SULFONIC OR SULPHONIC)
 L5 2 S L3 AND (DIAZO)
 L6 1 S L5 NOT L4

=> s l3 and polyamine

37008 POLYAMINE

L7 0 L3 AND POLYAMINE

=> d his

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FILE 'CAPLUS' ENTERED AT 07:21:02 ON 21 JUN 2008

L1 451 S (CROWN (W) ETHER) (P) ((AMINO(W) ACID) OR PEPTIDE OR PROTEIN
 L2 1 S L1 (P) (BENZOIC OR SULFONIC OR SULPHONIC)
 L3 189 S L1 (P) (REACT OR REACTION OR REACTING OR REACTED OR COMPLEX?)
 L4 2 S L3 AND (BENZOIC OR SULFONIC OR SULPHONIC)
 L5 2 S L3 AND (DIAZO)
 L6 1 S L5 NOT L4
 L7 0 S L3 AND POLYAMINE

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